

69/045018

Abstract of the Disclosure

A method and a pulse pressure sensor for sensing an arterial pulse pressure waveform. In one embodiment, the pulse pressure sensor includes a housing, a diaphragm, a piezoelectric device, and a self-contained amplifier. The skin-contact diaphragm is attached across a recess or opening in the housing. The piezoelectric device has a first portion mounted in a fixed relationship to the housing and a second portion displacementally coupled to the diaphragm. The solid-state amplifier has a signal input coupled to the piezoelectric device, wherein the piezoelectric device and amplifier together have a frequency response at least including a range from below approximately 0.1 hertz to above approximately 250 hertz. In one such embodiment, the housing and the skin-contact diaphragm of the sensor are stainless steel. In one such embodiment, the diaphragm has a skin-contact surface with a skin-contact dimension of between approximately 0.4 inch and 0.6 inch. In one embodiment, the sensor includes a solid-state amplifier that includes a high-input-impedance MOSFET input stage having an input resistance high enough to provide a frequency response that extends below approximately 0.1 hertz.

"Express Mail" mailing label no. Em384068762US
Date of Deposit: March 23, 1998

I hereby certify that this paper or fee is being deposited with the United States Postal Service as "Express Mail Post Office to Addressee" service under 37 CFR 1.10 on the date indicated above and in an envelope addressed to Assistant Commissioner for Patents, Washington, D.C. 20231.

Charles A. Lemaire
(Name)

Charles A. Lemaire 20 March 1998
(Signature) (date)